

To: Harris County Precinct Two Commissioner Adrian Garcia
From: Katie Short, Director; Amber Weed, Chief of Staff and Policy Director;
Amy Rose, Senior Analyst.
CC: Mike Lykes, Kris Banks, Mohammed Jamal with Precinct Two; Barbie
Robinson, Gwen Sims, and Will Hudson with Harris County Public
Health
Date: June 29, 2021
Re: **Monthly Memo on COVID-19 Vaccine Distribution, June 2021**

EXECUTIVE SUMMARY

In January 2021, Precinct Two requested the Analyst's Office produce a monthly memo regarding the distribution of COVID-19 vaccinations in Harris County. This is the sixth memo of a standing monthly memo the Analyst's Office produces as the vaccine distribution continues to evolve at the federal, state, and local levels.

This memo provides an overview of the COVID-19 pandemic and vaccine distribution in Harris County. Key findings from the data in this memo include:ⁱ

- As of June 13, 2021, **38.0% (1,790,902) of individuals in Harris County were fully vaccinated.**
- As of June 13, 2021, **8.6% (403,417) of individuals in Harris County were partially vaccinated.**
- Between May 23, 2021 and June 13, 2021, the **percentage of individuals in Harris County individuals vaccinated with at least one dose increased by 7.8% (from 2,034,711 to 2,194,319).**
- **Zip codes 77060 and 77013 have the fewest number of individuals per 100,000 residents fully vaccinated (22,214 and 22,955, respectively).**
- **Zip codes 77046 and 77030 have the greatest number of individuals per 100,000 residents fully vaccinated (136,495 and 160,266 respectively).**ⁱⁱ
- **The median of the median incomes of the fifteen Harris County zip codes with the fewest number of individuals per 100,000 residents fully vaccinated is \$39,808.**

ⁱ IMPORTANT NOTE: Not all data sums to totals reported. This is due to poor and inconsistent data reporting by providers, and because patients have not been required to disclose all demographic data. DSHS reports it is actively conducting county and provider-level analyses to identify if certain providers or areas are underreporting more than others for targeted data entry funding and training.

ⁱⁱ Note: Significantly large numbers of residents who were administered a vaccine in zip code 77030 report living at the same address. HCPH suggests that this discrepancy may be caused by hospital staff entering the same address for employees to speed up the vaccination process. According to HCPH, the vaccination rate of greater than 100% in zip code 77046 and 77056 is likely due to the low population (approximately 1,000 residents) relative to other zip codes, which means measured parameters are sensitive to bad data such as data entry errors, individuals using business addresses in lieu of a home residence, and other factors.

- The median of the median incomes of the fifteen Harris County zip codes with **the greatest number of individuals per 100,000 residents fully vaccinated is \$108,644.**
- For all individuals who were fully vaccinated by a Harris County provider,
 - **6.6% (119,046) are 76 years old or older;**
 - **20.6% (369,264) are ages 61-75;**
 - **26.7% (480,238) are ages 46-60;**
 - **27.2% (489,475) are ages 30-45; and**
 - **18.9% (332,708) are ages 12-29.**
- For all individuals who were fully vaccinated by a Harris County provider,
 - **30.2% (540,307) identify as White;**
 - **33.3% (597,066) identify as Hispanic/Latino;**
 - **10.8% (193,779) identify as Black;**
 - **9.2% (164,510) identify as Asian American or Pacific Islander;**
 - **5.4% (96,557) identify as Multi-Racial; and**
 - **0.3% (4,490) identify as American Indian or Alaskan Native.**
- Between January 1, 2020 and June 13, 2021:
 - **All providers in Harris County administered a cumulative 4,667,612 COVID-19 PCR tests;ⁱⁱⁱ**
 - **There were 402,727 positive COVID-19 cases confirmed by a PCR test in Harris County; and**
 - **There were 4,773 confirmed COVID-19 related deaths in Harris County.**

The Analyst's Office acknowledges Harris County Public Health for their significant contributions to this memo.

ⁱⁱⁱ PCR refers to the polymerase chain reaction or nucleic acid amplification tests commonly used to test for COVID-19.

INTRODUCTION

In January 2021, Precinct Two requested the Harris County Commissioners Court's Analyst's Office (the "Analyst's Office") produce a monthly memo regarding the distribution and administration of COVID-19 vaccinations in Harris County. This is the sixth memo of a standing monthly memo the Analyst's Office produces as the vaccine distribution continues to evolve at the federal, state, and local levels.

This memo includes data and analysis regarding COVID-19 testing, cases, deaths, and vaccine administration in Harris County. Precinct-level age and race and ethnicity data are provided where available. Previous versions of this memo reported analyses for individuals *vaccinated with at least one dose*. To better report on the collective efforts to reach herd immunity in Harris County, several analyses within this memo now report individuals *fully vaccinated* instead.

METHODOLOGY

Data utilized in this memo are from Harris County Public Health (HCPH); the Centers for Disease Control and Prevention (CDC); and Harris County's Applied Technologies Location Analysis and Statistics (ATLAS) System. Data reflect COVID-19 vaccine doses administered in Harris County by all providers from the beginning of the vaccine rollout, December 14, 2020, through June 13, 2021, and all testing, confirmed cases, and COVID-19-related death data from January 1, 2020 through June 13, 2021.

Data Collected from Harris County Public Health (HCPH)

The majority of data in this memo was sent to the Analyst's Office from HCPH, which analyzes vaccine data received by the Texas Department of State Health Services (DSHS) ImmTrac2 system. As the Local Health Authority for the County, HCPH also analyzes and receives testing, confirmed cases, and COVID-19-related death data received from local health providers (including the City of Houston) and other sources. Income data provided by HCPH reflects American Community Survey, 2014-2018 Five-Year Estimates. HCPH data and/or analysts aided in the development of all tables and figures.

DSHS advised the following via email regarding the data available on ImmTrac2:

- Providers in Texas have up to 24-hours to report doses administered in ImmTrac2, and the dashboard is updated by 4:00 pm with data reported as of 11:59 pm the previous night. This means there could be as much as a 48-hour lag between when a dose is administered and when it appears on ImmTrac2.

Prior to the fifth version of this memo, which was circulated on June 3, 2021, this memo included updates and projections on vaccine allocations to the State of Texas or Harris County using DSHS data. However, as of May 10, 2021, DSHS announced it is no longer distributing weekly allocations of vaccine doses to providers due to a "sufficient supply of vaccine."^{iv} Due to this changed strategy of allocating vaccine, this memo no

^{iv} Department of State Health Services (DSHS) COVID-19 Vaccine Allocations. Retrieved May 27, 2021, from <https://www.dshs.state.tx.us/coronavirus/immunize/vaccineallocations.aspx>

longer provides updates and projections on vaccine allocations to the State of Texas or Harris County.

Data Collected from Centers for Disease Control and Prevention (CDC)

The Analyst's Office collected information on Social vulnerability from the Centers for Disease Control and Prevention (CDC). Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human caused threats, such as toxic chemical spills.^v The Social Vulnerability Index (SVI) was created by the CDC and depicts the social vulnerability of communities, at census tract level, within a given county. SVI groups fifteen census-derived factors into four themes that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability Index combines all the variables to provide a comprehensive assessment. SVI data aided with the development of Table 1.

Data Collected from Applied Technologies Location Analysis and Statistics (ATLAS)

The Analyst's Office collected Commissioner Precinct zip code data from Harris County's Applied Technologies Location Analysis and Statistics (ATLAS) System.

UPDATE: Several analyses in this memo have been updated to reflect *individuals fully vaccinated*, rather than *individuals with at least one dose*. Specifically:

- **Table 1:** Number of Individuals Per 100,000 Residents Fully Vaccinated by Zip Code, Median Income, SVI, and Commissioner Precinct
- **Figure 4:** and Individuals Fully Vaccinated, By Age and Gender
- **Table 2:** Individuals Vaccinated Fully Vaccinated, By Age
- **Figure 5 and Table 3:** Individuals Fully Vaccinated by Race/Ethnicity

^v Centers for Disease Control (CDC) Social Vulnerability Index, a tool to identify socially vulnerable communities.

BACKGROUND

The spread of the novel coronavirus, the cause of COVID-19, began in the United States in early 2020. Since then, local health entities have tracked the testing, number of confirmed positive cases, and deaths related to COVID-19.

In December 2020, two-dose vaccines from two producers, Moderna and Pfizer-BioNTech, were authorized for emergency use from the US Food and Drug Administration (FDA). In February 2021, the FDA authorized Johnson & Johnson's (J&J) one-dose vaccine for emergency use.

For the bulk of vaccine allocation, the federal government distributed COVID-19 vaccine doses to the Texas Department of State Health Services (DSHS), which then allocated doses to local providers in Harris County. Any facility, organization, or healthcare provider licensed to possess or administer vaccine or provide vaccination services is eligible to enroll as a designated provider. Providers include: emergency services; health centers (community, federally qualified, migrant, rural); hospitals; long-term care; medical clinic/doctor's office; pharmacy; public health/government; federal long-term care; and other facilities.^{vi} As of May 10, 2021, DSHS no longer provides direct allocations to local providers; providers are now able to order vaccines directly from DSHS on a daily basis as needed.^{vii}

From December 2020 to March 28, 2021, vaccines were made available for individuals in DSHS's Phase 1A (front-line healthcare workers and residents of long-term care facilities) and 1B (individuals ages 65+ and individuals ages 16+ with "at least one chronic medical condition that puts them at increased risk for severe illness from the virus that causes COVID-19").^{viii} ix On March 29, 2021, Texas expanded vaccine eligibility to all individuals age 16 and older. Beginning May 12, 2021, Texas expanded vaccine eligibility to all individuals age 12 and older. Currently, all vaccines are authorized for individuals age 18 and older; the Pfizer vaccine is authorized for individuals age 12 and older.^x The population of individuals age 12 and older in Harris County is 3,852,215.^{xi}

^{vi} Department of State Health Services (DSHS) COVID-19 Vaccine Allocation Dashboard. Retrieved March 29, 2021, from <https://tabexternal.dshs.texas.gov/t/THD/views/COVID-19VaccineinTexasDashboard/IndividualsVaccinated>

^{vii} Department of State Health Services (DSHS) COVID-19 Vaccine Allocations. Retrieved May 27, 2021, from <https://www.dshs.state.tx.us/coronavirus/immunize/vaccineallocations.aspx>

^{viii} Department of State Health Services (DSHS) COVID-19 Vaccine Allocation Phase 1 Definition

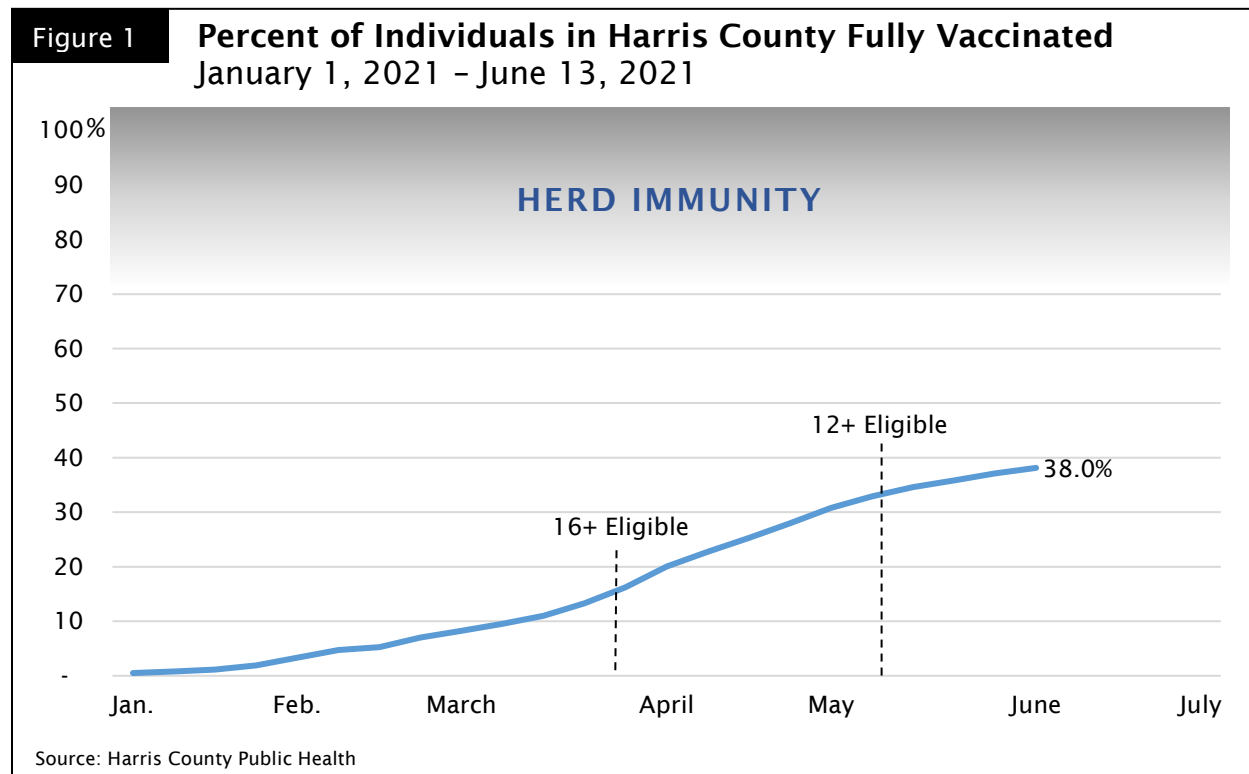
^{ix} Department of State Health Services (DSHS) COVID-19 Vaccine Allocation Phase 1B Definition

^x *COVID-19 Vaccine Information*. (n.d.). Texas Department of State Health Services. Retrieved May 27, 2021, from <https://dshs.texas.gov/covidvaccine/>

^{xi} Analyst's Office analysis of US Census Bureau, American Community Survey 2019 data. Previous versions of this memo used the US Census Bureau 2018 population data.

INDIVIDUALS IN HARRIS COUNTY FULLY VACCINATED

Figure 1 presents the percentage of Harris County individuals fully vaccinated between January 1, 2021 and June 13, 2021.^{xii} This figure includes individuals vaccinated by Harris County Public Health (HCPH) and all other providers. HCPH reports countywide data regarding individuals fully vaccinated—the data presented below extends through the week of June 7 – 13, 2021.



On March 29, 2021, as shown in Figure 1, Texas expanded vaccine eligibility to all individuals age 16 and older. Beginning May 12, 2021, Texas expanded vaccine eligibility to all individuals age 12 and older.

As of June 13, 2021, 38.0% (1,790,902) of all individuals in Harris County were fully vaccinated, meaning an individual has received both doses of either the Moderna or Pfizer vaccines or a single dose of the Johnson & Johnson vaccine.^{xiii}

A total of 8.6% (403,417) of all individuals in Harris County were partially vaccinated as of June 13, 2021.^{xiv} Individuals who are partially vaccinated and individuals fully vaccinated are mutually exclusive, meaning individuals partially vaccinated only includes individuals who have received one vaccine dose of a two-dose shot (Pfizer or Moderna) and individuals fully vaccinated includes individuals who have received either the Johnson & Johnson vaccine or two vaccine doses of Pfizer or Moderna.

^{xii} Previous iterations of this memo presented partially and fully vaccinated individuals as a percentage of the total *eligible* population. Total population is used to calculate herd immunity.

^{xiii} Figure assumes Harris County's total population of 4,713,325, per American Community Survey 2019, 1 Year Estimates.

^{xiv} Figure assumes Harris County's total population of 4,713,325, per American Community Survey 2019, 1 Year Estimates.

NUMBER OF INDIVIDUALS PER 100,000 RESIDENTS FULLY VACCINATED BY ZIP CODE

Table 1 presents the number of individuals per 100,000 residents fully vaccinated by zip code.^{xv} The table also includes the median income, Social Vulnerability Index (SVI) score, and commissioner precinct for each zip code. Commissioner precinct boundaries do not align with zip code boundaries; some zip codes are in multiple precincts. Precincts are listed in order of the greatest to least percentage of zip code land mass within the precinct.

Social vulnerability describes a community's ability to prevent human suffering and financial loss in the event of disaster (such as a hurricane or disease outbreak).^{xvi} SVI rankings are based on percentiles valuing in range from 0 to 1 (with higher values indicating greater vulnerability). SVI data is often presented using quartile classification. This analysis utilizes CDC's SVI classifications as follows: 0-0.25 (lowest vulnerability); 0.25-0.5 (moderate low); 0.50-0.75 (moderate high); and 0.75-1 (highest vulnerability).

Table 1 ranks zip codes within Harris County to show relative vulnerability in comparison to the rest of Harris County. The median of the median incomes of the fifteen Harris County zip codes with the **fewest number of individuals per 100,000 residents fully vaccinated is \$39,808**. The median of the median incomes of the fifteen Harris County zip codes with the **greatest number of individuals per 100,000 residents fully vaccinated is \$108,644**.^{xvii xviii}

^{xv} Previous versions of this analysis reflected the number of individuals vaccinated with at least one dose. This iteration only includes individuals fully vaccinated, which is a smaller number in most cases.

^{xvi} Centers for Disease Control (CDC) SVI 2016 Documentation.

^{xvii} Note: Significantly large numbers of residents who were administered a vaccine in zip code 77030 report living at the same address. HCPH suggests that this discrepancy may be caused by hospital staff entering the same address for employees to speed up the vaccination process. According to HCPH, the vaccination rate of greater than 100% in zip codes 77056, 77046, and 77030 is likely due to the low population relative to other zip codes, which means measured parameters are sensitive to bad data such as data entry errors, individuals using business addresses in lieu of a home residence, and other factors. For a full list of zip codes, see Appendix D.

^{xviii} Analysis excludes zip codes with small percentage of land mass in Harris County and zip codes 77507 and 77094, which have no income data available.

Table 1

Number of Individuals Per 100,000 Residents Fully Vaccinated by Zip Code, Median Income, SVI, and Commissioner Precinct December 14, 2020 – June 13, 2021

Zip Codes With Fewest Number of Individuals Per 100,000 Residents Fully Vaccinated^{xix}

Zip Code	Number Per 100k	Median Income	SVI	Commissioner Precinct(s)
77060	22,214	\$31,006	0.94	1,2,4
77013	22,955	\$38,665	0.98	2,1
77090	24,441	\$39,808	0.70	1,4
77506	24,544	\$41,804	0.95	2
77067	24,819	\$43,282	0.79	4,1
77083	24,866	\$54,425	0.53	3*
77081	24,892	\$33,502	0.81	3
77078	26,669	\$40,298	0.89	1,2
77076	26,686	\$38,346	0.86	2,1
77050	27,005	\$48,500	0.71	1,2
77093	27,168	\$31,301	0.97	2,1
77039	27,507	\$36,769	0.73	2,1
77036	28,020	\$30,952	0.93	3,1
77336	28,026	\$68,596	0.30	2,4
77037	28,217	\$43,180	0.69	1,2,4

Zip Codes With Greatest Number of Individuals Per 100,000 Residents Fully Vaccinated

Zip Code	Number Per 100k	Median Income	SVI	Commissioner Precinct(s)
77005	61,645	\$192,380	0.03	3
77094	62,420	\$178,354	NA	3,1
77059	63,757	\$139,163	0.05	2
77006	64,753	\$85,956	0.09	1
77008	66,999	\$108,644	0.08	4,1
77007	68,127	\$125,653	0.01	4,1,2
77002	71,483	\$71,369	0.42	2
77019	73,174	\$116,207	0.09	4,1
77098	77,032	\$91,138	0.07	4,1,3
77024	78,434	\$123,274	0.16	3,4
77027	87,967	\$98,463	0.01	4,3
77010	89,907	\$250,001	0.02	1
77056	111,524	\$108,359	0.14	3
77046	136,495	\$87,891	0.10	4
77030	160,266	\$90,075	0.28	1

□ Moderate High Vulnerability

□ Highest Vulnerability

□ Moderate Low Vulnerability

□ Lowest Vulnerability

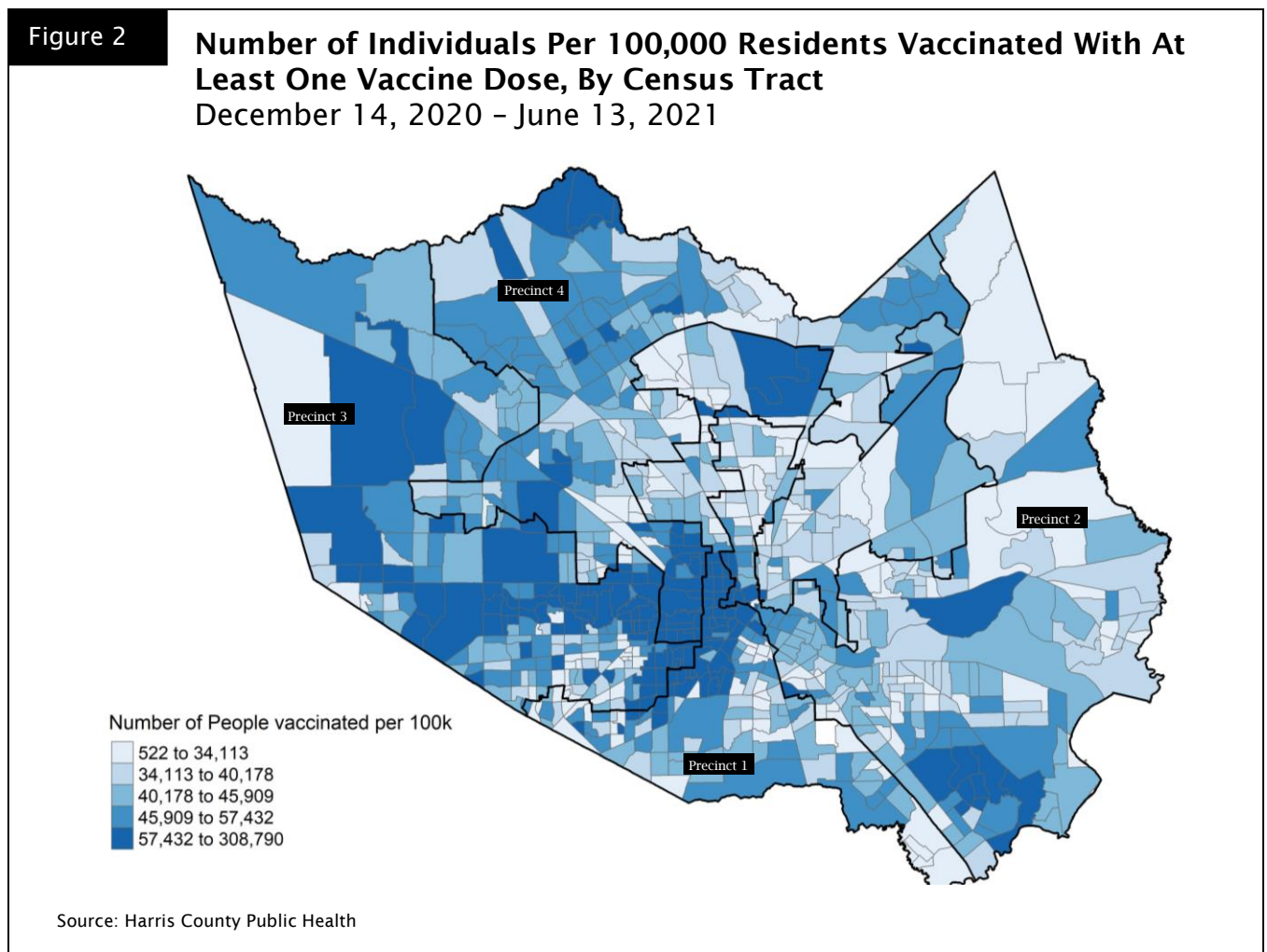
*Indicates partial zip code land mass is outside of Harris County.

Source: American Community Survey (ACS) 2018 5-year estimates downloaded from Harris County's Applied Technologies Location Analysis and Statistics (ATLAS), Centers for Disease Control (CDC), and Harris County Public Health (HCPH)

^{xix} Previous versions of this analysis reflected the number of individuals vaccinated with at least one dose. This iteration includes individuals fully vaccinated, which is a smaller number in most cases.

NUMBER OF INDIVIDUALS VACCINATED WITH AT LEAST ONE VACCINE DOSE PER 100,000 RESIDENTS BY CENSUS TRACT

Figure 2 presents the number of individuals per 100,000 Harris County residents vaccinated with at least one vaccine dose by census tract.

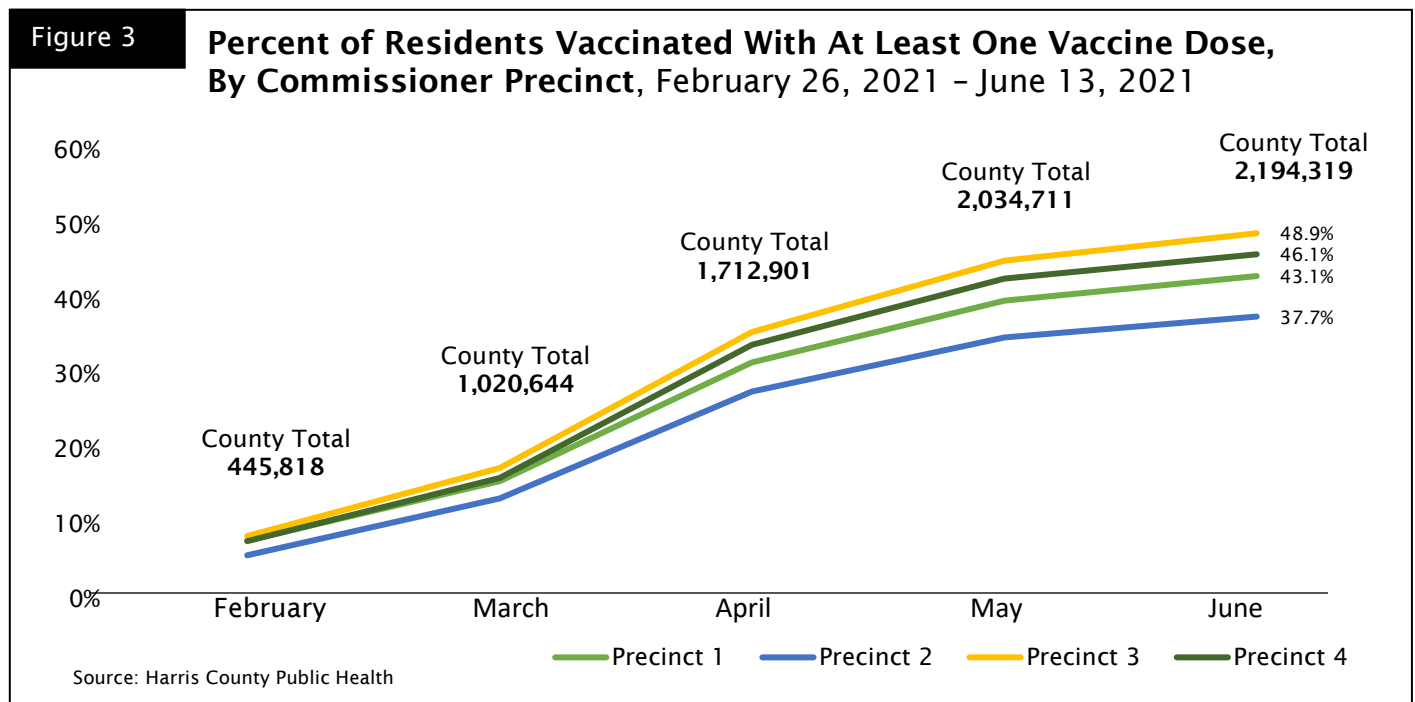


As of June 13, 2021, **46.6% (2,194,319) of Harris County residents received at least one vaccine dose**—57.0% of Harris County’s eligible population, individuals age 12 and older.^{xx}

^{xx} Figure assumes Harris County’s total population of 4,713,325, per American Community Survey 2019, 1 Year Estimates. Eligible individuals include individuals ages 12 and over, this population is estimated to be 3,852,215 in Harris County, per Analyst’s Office analysis of American Community Survey 2019, 1 Year Estimates.

PERCENT OF RESIDENTS VACCINATED WITH AT LEAST ONE VACCINE DOSE BY COMMISSIONER PRECINCT

Figure 3 demonstrates the growth in the percent of residents vaccinated with at least one dose per commissioner precinct from February 26, 2021 through June 13, 2021 for all four Harris County commissioner precincts.



Between February 26, 2021 and June 13, 2021, 46.6% (2,194,319) of individuals in Harris County were vaccinated with at least one vaccine dose.^{xxi} In the early months of the vaccine distribution in Harris County, between February and March, the number of individuals vaccinated with at least one dose increase by 128.9%. Recently, the growth in number of individuals vaccinated with at least one dose has slowed—only a 7.8% (from 2,034,711 to 2,194,319) increase between May 23, 2021 and June 13, 2021.

As of June 13, 2021:^{xxii}

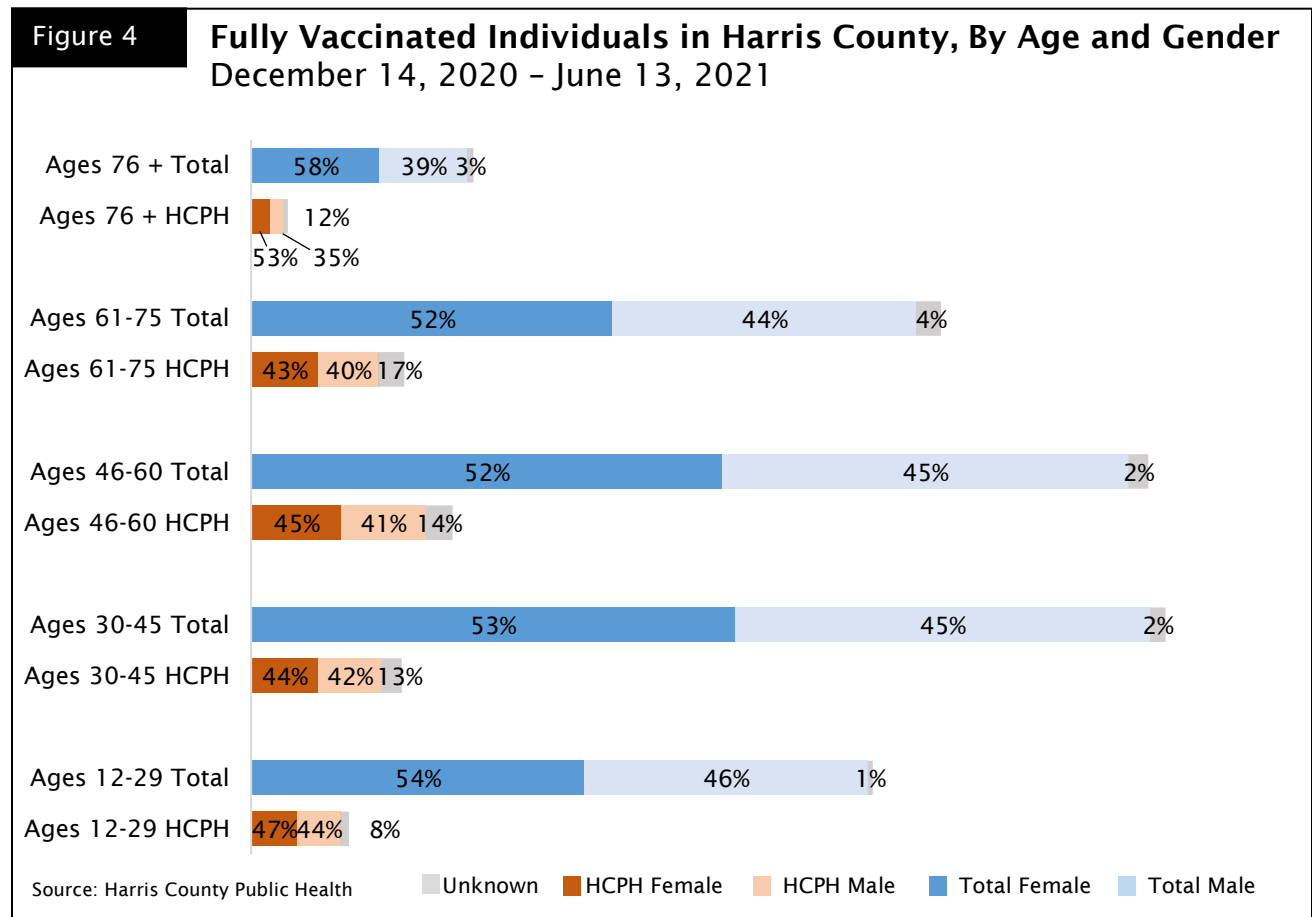
- **43.1% (496,074) of Precinct One residents** received at least one vaccine dose—an 8.3% increase over the prior month;
- **37.7% (419,050) of Precinct Two residents** received at least one vaccine dose—the lowest percentage of the four precincts, but an 8.0% increase for the Precinct over the prior month;
- **48.9% (618,833) of Precinct Three residents** received at least one vaccine dose—the greatest percentage of the four precincts, and an 8.1% increase over the prior month; and,
- **46.1% (556,725) of Precinct Four residents** received at least one vaccine dose—an 7.6% increase over the prior month.

^{xxi} Figure assumes Harris County's total population of 4,713,325, per American Community Survey 2019, 1 Year Estimates.

^{xxii} Precinct totals do not sum to County total because 103,637 individuals have addresses that cannot be geo-coded into a Precinct.

FULLY VACCINATED INDIVIDUALS BY AGE AND GENDER

Figure 4 and **Table 2**, which follows, reflect all individuals fully vaccinated by any provider in Harris County and those vaccinated by Harris County Public Health (HCPH) by the individual's age and gender.^{xxiii}



Of the individuals who are fully vaccinated by a Harris County provider, 53% (951,431) are female; 45% (800,852) are male; 0.01% (122) identify as “other”; and 2% (38,448) are recorded as unknown gender.^{xxiv}

^{xxiii} Previous versions of this analysis reflected the number of individuals vaccinated with at least one dose. This iteration includes individuals fully vaccinated, which is a small number in most cases.

^{xxiv} Age and gender totals do not sum to vaccine doses administered totals due to some records having incomplete or incorrect data.

FULLY VACCINATED INDIVIDUALS BY AGE GROUP

Table 2 reflects all individuals fully vaccinated by providers in Harris County and those vaccinated by Harris County Public Health (HCPH) by the individual's age group and includes the age group percentage of the total vaccinated population.^{xxv} For context, **Table 2** also includes the percentage of Harris County's total population by age group.

Table 2

Fully Vaccinated Individuals by Age Group December 14, 2020 – June 13, 2021				
	Age Group	Number of Individuals Vaccinated	Percentage of Harris County's Vaccinated Population ^{xxvi}	Percentage of Harris County's Total Population ^{xxvii}
All Providers	76+	119,046	6.6%	5.0%
HCPH		19,664		
All Providers	61-75	369,264	20.6%	14.8%
HCPH		82,030		
All Providers	46-60	480,238	26.8%	21.8%
HCPH		107,800		
All Providers	30-45	489,475	27.3%	27.2%
HCPH		80,656		
All Providers	12-29	332,708	18.6%	31.1%
HCPH		52,312		

Source: Harris County Public Health

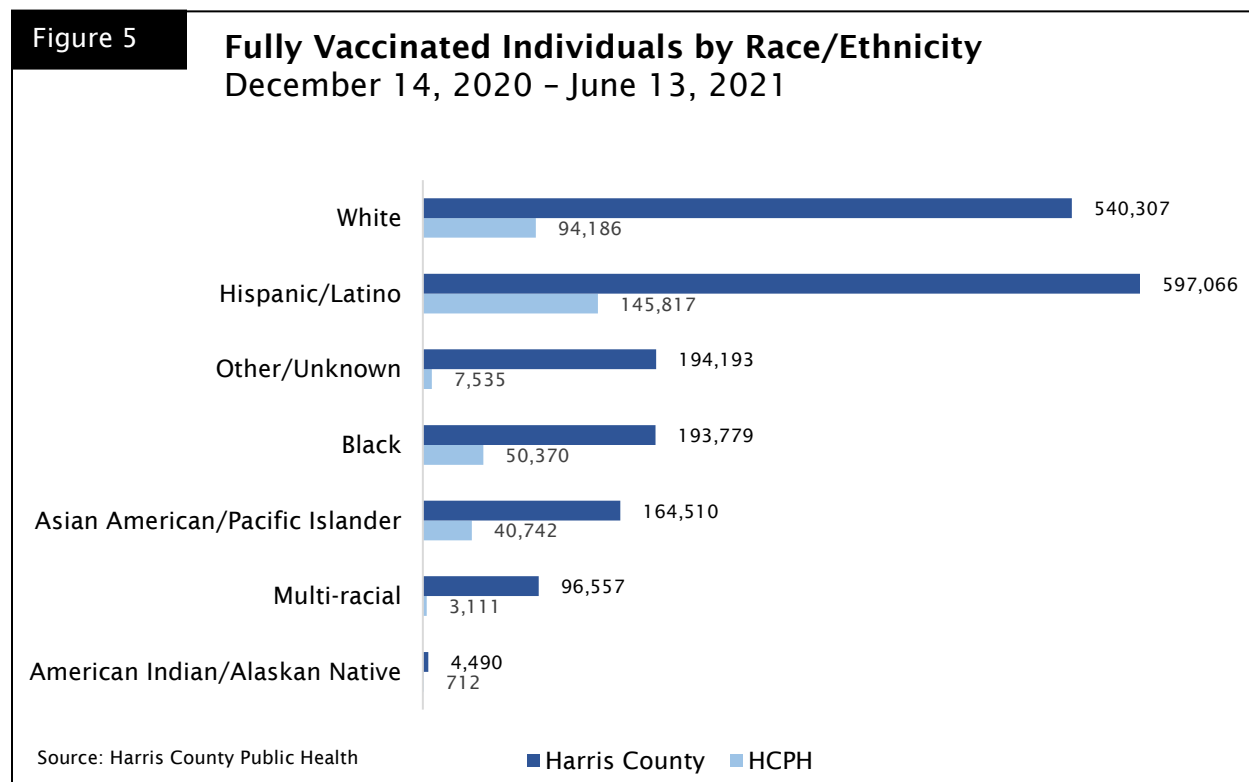
^{xxv} Previous versions of this analysis reflected the number of individuals vaccinated with at least one dose. This iteration includes individuals fully vaccinated, which is a small number in most cases.

^{xxvi} Reflects the total age group vaccinated with at least one dose as a percentage of all individuals vaccinated.

^{xxvii} Age group populations estimated by the Analyst's Office using American Community Survey 2019 data. Figures are not exact due to data limitations.

FULLY VACCINATED INDIVIDUALS BY RACE AND ETHNICITY

Figure 5 and **Table 3**, which follows, reflect the race and ethnicity of individuals in Harris County who are fully vaccinated by any provider in Harris County and by Harris County Public Health (HCPH).^{xxviii xxix}



^{xxviii} Note: Prior to February 4, 2021, providers were not required to report race/ethnicity when reporting doses to Texas Department of State Health Services (DSHS) because vaccine recipients are allowed to decline disclosing their race/ethnicity to a provider.

^{xxix} Previous versions of this analysis reflected the number of individuals vaccinated with at least one dose. This iteration includes individuals fully vaccinated, which is a small number in most cases.

FULLY VACCINATED INDIVIDUALS BY RACE AND ETHNICITY

Table 3 reflects the race and ethnicity of individuals in Harris County who are fully vaccinated by providers in Harris County and by Harris County Public Health (HCPH).^{xxx}
^{xxxi}For context, **Table 3** also includes the percentage of Harris County's total population by race and ethnicity.

Table 3

Fully Vaccinated Individuals by Race/Ethnicity December 14, 2020 – June 13, 2021				
	Race/Ethnicity	Number of Individuals Vaccinated	Percentage of Harris County's Vaccinated Population	Percentage of Harris County's Total Population
All Providers	White	540,307	30.2%	28.9%
HCPH		94,186		
All Providers	Hispanic/Latino	597,066	33.3%	43.3%
HCPH		145,817		
All Providers	Other/Unknown	194,193	10.8%	0.3%
HCPH		7,535		
All Providers	Black	193,779	10.8%	18.7%
HCPH		50,370		
All Providers	Asian American/ Pacific Islander	164,510	9.2%	7.1%
HCPH		40,742		
All Providers	Multi-racial	96,557	5.4%	1.6%
HCPH		3,111		
All Providers	American Indian/ Alaskan Native	4,490	0.3%	0.2%
HCPH		712		

Source: Harris County Public Health

^{xxx} Note: Prior to February 4, 2021, providers were not required to report race/ethnicity when reporting doses to Texas Department of State Health Services (DSHS) because vaccine recipients are allowed to decline disclosing their race/ethnicity to a provider.

^{xxxi} Previous versions of this analysis reflected the number of individuals vaccinated with at least one dose. This iteration includes individuals fully vaccinated, which is a small number in most cases.

INDIVIDUALS VACCINATED WITH AT LEAST ONE DOSE BY RACE AND ETHNICITY AND COMMISSIONER PRECINCT

Table 4 reflects the race and ethnicity of individuals in Harris County who are vaccinated with at least one dose by providers in Harris County by Commissioner Precinct. For context, **Table 4** also includes the percentage of each Commissioner Precinct's total population by race and ethnicity.

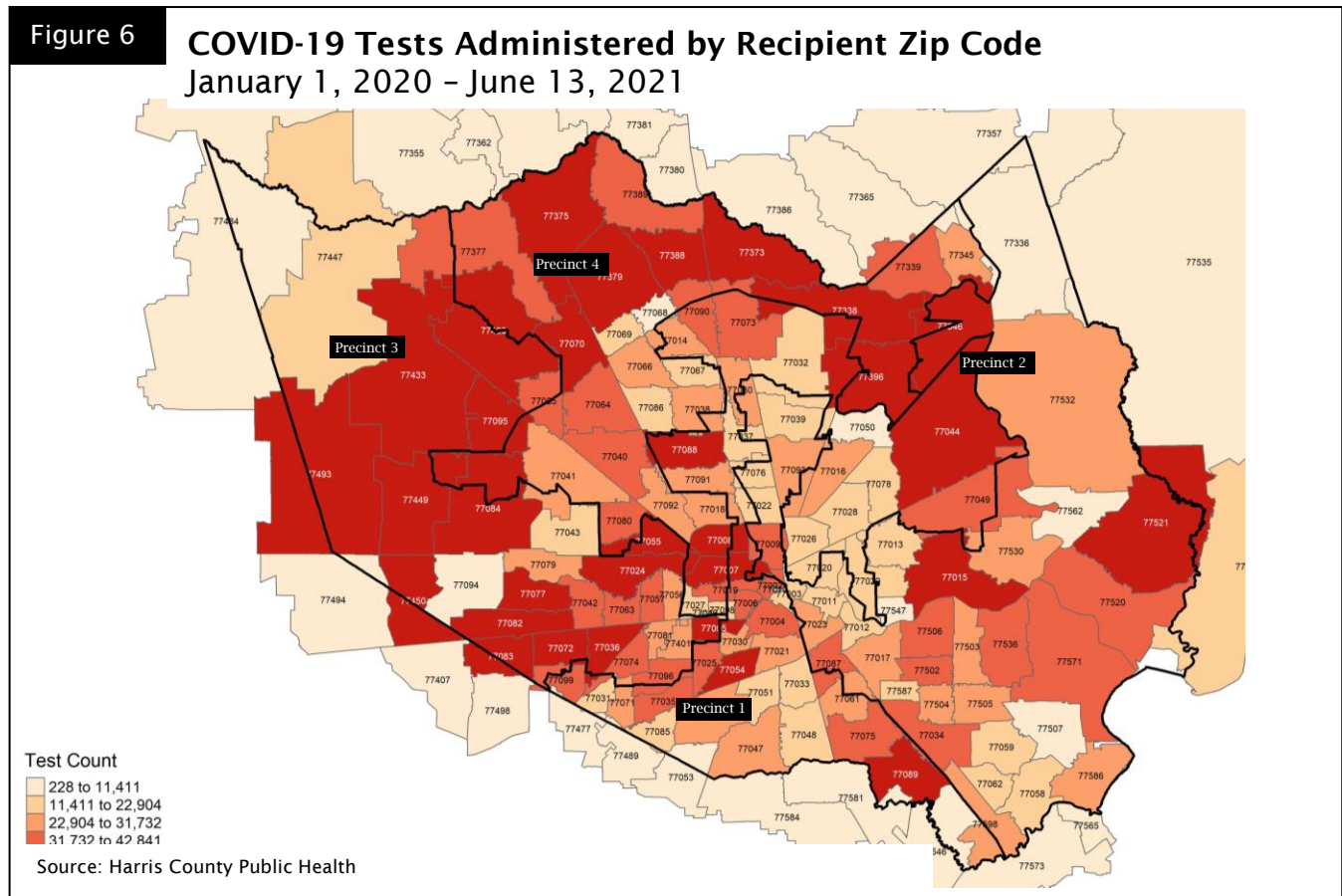
Table 4

Individuals Vaccinated With At Least One Dose by Race/Ethnicity, By Commissioner Precinct December 14, 2020 – June 13, 2021			
Race/Ethnicity	Number of Individuals Vaccinated	Percentage of Precinct's Vaccinated Population	Percentage of Total Precinct Population
Precinct 1			
White	97,492	19.7%	17.1%
Hispanic/Latino	169,723	34.2%	41.3%
Other/Unknown	56,666	11.4%	0.2%
Black	103,302	20.8%	34.5%
Asian Am./Pacific Islander	36,625	7.4%	5.4%
Multi-racial	31,078	6.3%	1.4%
Am. Indian/Alaskan Native	1,188	0.2%	0.1%
Precinct 2			
White	113,152	27.0%	26.5%
Hispanic/Latino	211,311	50.4%	60.8%
Other/Unknown	38,603	9.2%	0.1%
Black	23,674	5.6%	8.8%
Asian Am./Pacific Islander	16,018	3.8%	2.5%
Am. Indian/Alaskan Native	874	0.2%	0.1%
Multi-racial	15,418	3.7%	1.2%
Precinct 3			
White	201,820	33%	36.0%
Hispanic/Latino	180,188	29%	34.8%
Other/Unknown	68,539	11%	0.3%
Black	51,764	8%	15.0%
Asian Am./Pacific Islander	82,134	13%	11.8%
Multi-racial	32,574	5%	1.9%
Am. Indian/Alaskan Native	1,814	0%	0.2%
Precinct 4			
White	200,359	36.0%	37.9%
Hispanic/Latino	165,012	29.6%	37.0%
Other/Unknown	60,087	10.8%	0.3%
Black	50,804	9.1%	15.5%
Asian Am./Pacific Islander	51,888	9.3%	7.5%
Multi-racial	26,972	4.8%	1.6%
Am. Indian/Alaskan Native	1,603	0.3%	0.2%

Sources: Harris County Public Health, Harris County Budget Management Department

COVID-19 TESTS BY ZIP CODE

Figure 6 reflects the total number of COVID-19 polymerase chain reaction (PCR) tests administered to Harris County residents by all providers in Harris County by zip code, and **Table 5** reflects the number of COVID-19 PCR tests administered by commissioner precinct.^{xxxii}



Between January 1, 2020 and June 13, 2021, providers in Harris County **administered 4,667,612 COVID-19 tests**. For a full list of tests administered by recipient zip code, see Appendix A.^{xxxiii}

Table 5

COVID-19 Tests Administered, by Commissioner Precinct and for Harris County, January 1, 2020 – June 13, 2021

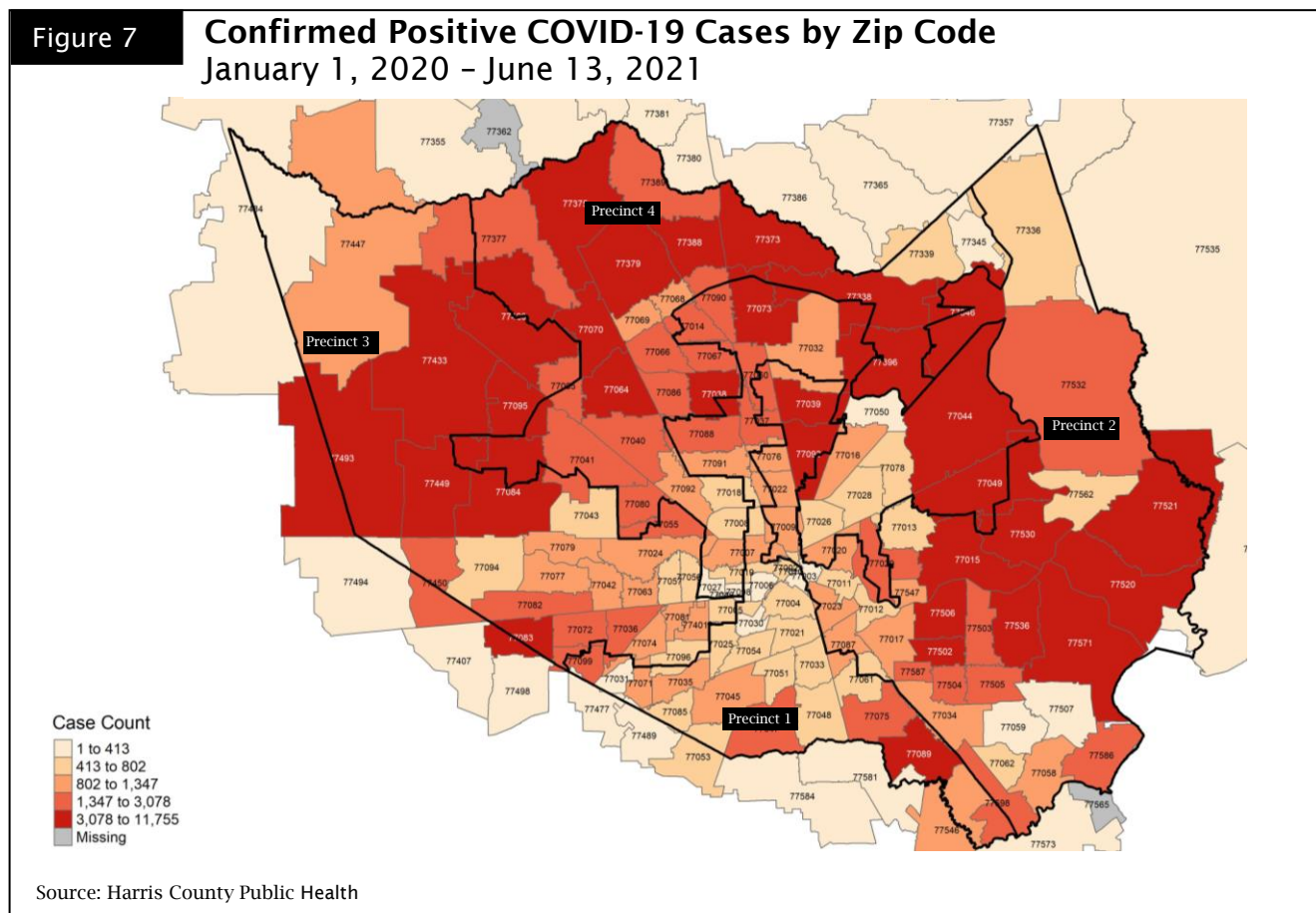
Precinct 1	Precinct 2	Precinct 3	Precinct 4	Total Tests
1,101,148	993,566	1,170,654	1,123,052	4,667,612

^{xxxii} PCR refers to the polymerase chain reaction tests commonly used to test for COVID-19.

^{xxxiii} Precinct totals do not sum to Total Tests because 279,612 tests administered have addresses that cannot be geo-coded into a Precinct.

CONFIRMED POSITIVE COVID-19 CASES BY ZIP CODE

Figure 7 reflects the total number of COVID-19 positive cases confirmed by a PCR test in Harris County, reported by zip code and **Table 5** reflects the number of positive COVID-19 cases by commissioner precinct.^{xxxiv}



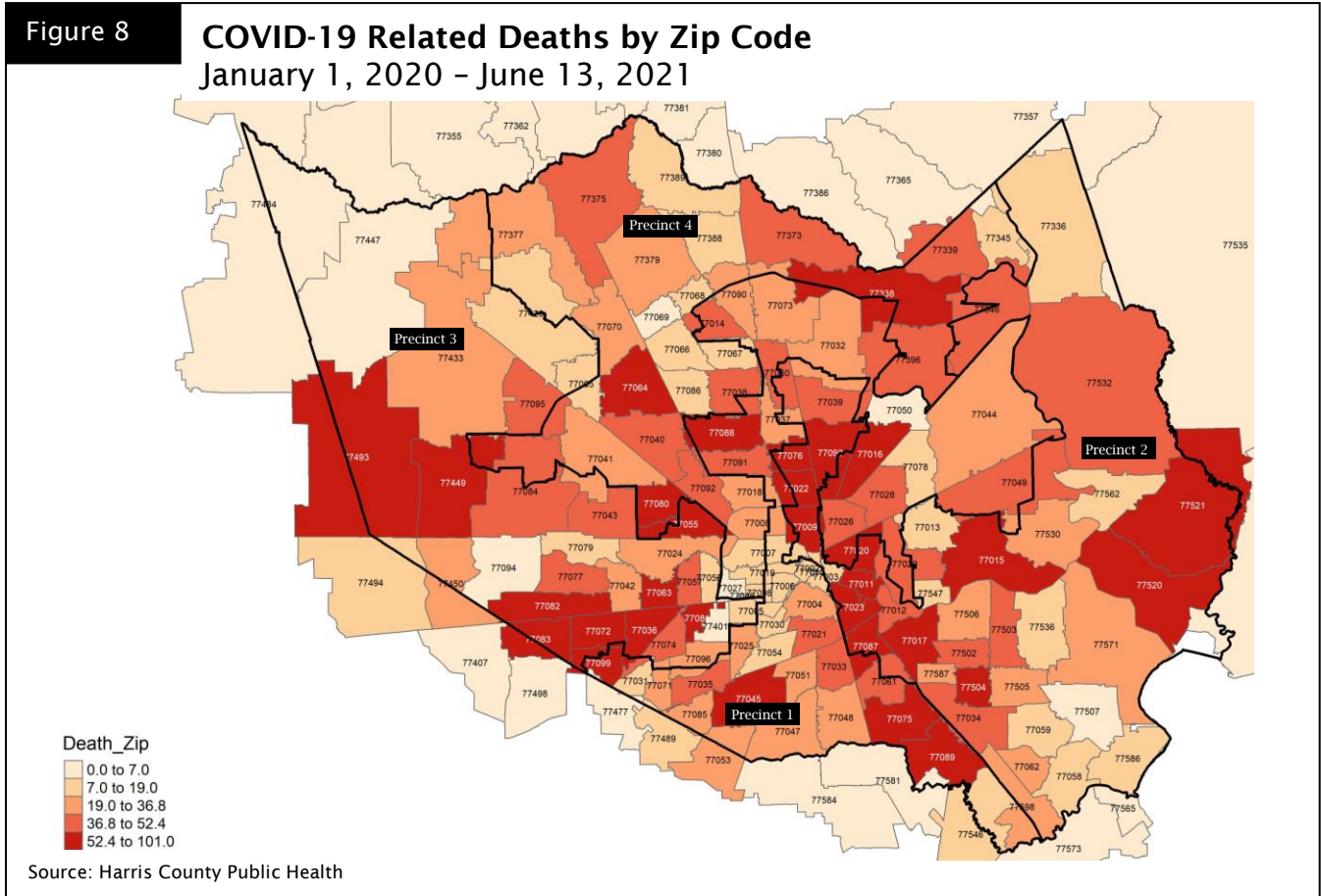
Between January 1, 2020 and June 13, 2021, there were **402,727 confirmed positive cases of COVID-19** in Harris County. For a full list of positive cases by zip code, see Appendix B.^{xxxv}

^{xxxiv} PCR refers to the polymerase chain reaction tests commonly used to test for COVID-19.

^{xxxv} Previous versions of this report included precinct-level analysis of confirmed positive COVID-19 cases. At the time of this publication, HCPH was unable to provide up-to-date and accurate precinct-level case data.

CONFIRMED COVID-19 RELATED DEATHS BY ZIP CODE

Figure 8 reflects the total number of confirmed COVID-19 related deaths in Harris County by zip code and **Table 6** reflects the number of COVID-19 related deaths by commissioner precinct.



Between January 1, 2020 and June 13, 2021, there were **4,773 confirmed COVID-19 related deaths** in Harris County. For a full list of deaths by zip code, see Appendix C.^{xxxvi}

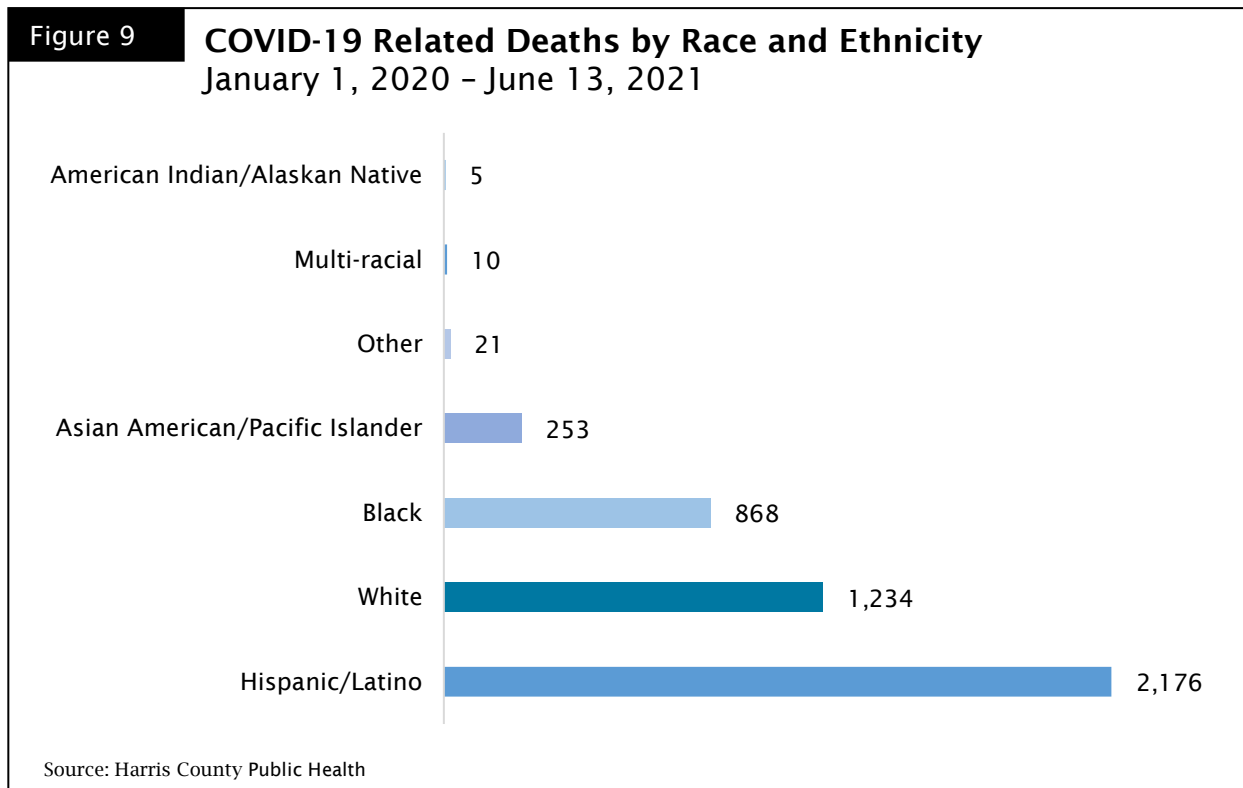
Table 6

COVID-19 Related Deaths by Commissioner Precinct and for Harris County, January 1, 2020 - June 13, 2021									
Precinct 1		Precinct 2		Precinct 3		Precinct 4		County Total	
Number of Deaths	% of Precinct Population	Number of Deaths	% of Precinct Population	Number of Deaths	% of Precinct Population	Number of Deaths	% of Precinct Population	Number of Deaths	% of County Population
1,430	0.12%	1,380	0.12%	1,074	0.08%	864	0.07%	4,773	0.10%

^{xxxvi} Precinct totals do not sum to Total Deaths because 25 deaths have addresses that cannot be geo-coded into a Precinct.

COVID-19 RELATED DEATHS BY RACE AND ETHNICITY

Figure 9 reflects the total number of confirmed COVID-19 related deaths in Harris County by race and ethnicity.^{xxxvii}



Of the 4,773 individuals in Harris County who died of a COVID-19-related death:^{xxxviii}

- **0.1% (5) identified as American Indian or Alaskan Native**, and for context, 0.2% of County residents identify as American Indian or Alaskan Native;
- **0.2% (10) identified as Multi-racial**, and for context, 1.6% of County residents identify as Two or More Races;
- **0.4% (21) were recorded as Other race and ethnicity**;
- **5.3% (253) identified as Asian or Pacific Islander**, and for context, 7.1% of County residents identify as Asian, Pacific Islander, or Native Hawaiian;
- **18.2% (868) identified as Black**, and for context, 18.7% of County residents identify as Black;
- **25.9% (1,234) identified as White**, and for context, 28.9% of County residents identify as White; and
- **45.6% (2,176) identified as Hispanic**, and for context, 43.3% of County residents identify as Hispanic.

^{xxxvii} Race and ethnicity totals do not sum to Total Precinct Deaths because 206 deaths do not have race and ethnicity data available.

^{xxxviii} County-level race and ethnicity data are derived from US Census Bureau Population Estimates.

APPENDIX A

Total COVID-19 Tests Administered by Zip Code Ordered by Tests Administered, January 1, 2020 – June 13, 2021							
Zip Code	Tests Administered	Zip Code	Tests Administered	Zip Code	Tests Administered	Zip Code	Tests Administered
77565	228	77029	15,236	77017	28,929	77339	41,301
77362	258	77085	15,522	77504	29,074	77064	42,666
77381	273	77069	15,554	77056	29,992	77388	43,104
77382	333	77587	15,759	77532	30,041	77088	43,288
77380	441	77011	15,971	77079	30,196	77015	43,840
77354	697	77033	16,074	77081	30,221	77008	45,026
77507	796	77003	16,155	77041	30,730	77024	46,271
77477	871	77058	16,405	77047	30,854	77054	46,691
77355	878	77447	16,815	77045	31,496	77070	46,953
77010	1,051	77026	17,145	77093	31,516	77055	47,004
77386	1,097	77059	18,011	77505	31,594	77072	47,326
77535	1,118	77067	20,586	77025	31,767	77044	48,473
77489	1,134	77098	20,642	77042	32,164	77338	50,045
77581	1,500	77039	21,270	77087	32,249	77082	51,053
77357	1,534	77022	21,734	77035	32,360	77373	51,920
77053	1,644	77086	21,794	77019	33,192	77036	51,986
77498	1,713	77048	21,866	77506	33,368	77007	52,009
77046	2,196	77020	21,913	77065	33,550	77089	55,419
77365	2,277	77027	22,206	77096	33,835	77077	57,073
77407	2,322	77043	22,386	77006	33,852	77493	58,338
77584	2,383	77062	22,750	77080	33,962	77375	60,782
77573	2,540	77076	22,898	77520	34,077	77521	61,052
77494	3,260	77030	22,926	77075	34,342	77450	62,176
77546	3,295	77061	23,072	77034	34,433	77083	65,894
77050	3,416	77091	23,489	77073	35,122	77396	68,789
77562	7,282	77038	23,871	77389	35,932	77346	72,404
77094	8,354	77586	24,046	77377	35,954	77095	73,444
77484	8,627	77060	24,405	77074	36,224	77379	75,011
77068	9,035	77021	25,511	77057	36,283	77429	83,477
77547	9,113	77016	25,719	77090	37,158	77084	91,532
77336	11,326	77092	25,787	77536	37,220	77433	97,166
77078	11,467	77014	25,952	77049	37,459	77005	113,618
77013	11,799	77066	26,055	77002	37,591	77449	125,635
77031	12,212	77023	26,108	77571	38,613		
77523	13,067	77071	26,635	77004	39,276		
77028	13,505	77345	26,697	77009	39,291		
77037	13,586	77401	26,892	77063	39,327		
77032	13,587	77503	28,020	77040	40,552		
77012	14,272	77018	28,408	77099	40,744		
77051	15,064	77530	28,434	77502	40,952		

APPENDIX B

Total COVID-19 Confirmed Positive Cases by Zip Code Ordered by Positive Cases, January 1, 2020 – June 13, 2021

Zip Code	Positive Cases	Zip Code	Positive Cases	Zip Code	Positive Cases	Zip Code	Positive Cases
77381	1-5	77028	519	77071	1,074	77086	3,011
77382	1-5	77004	534	77016	1,076	77088	3,050
77355	1-5	77011	542	77017	1,115	77450	3,061
77386	1-5	77002	567	77447	1,117	77090	3,071
77535	1-5	77013	576	77547	1,125	77038	3,080
77354	1-5	77021	576	77074	1,141	77039	3,131
77380	6	77048	599	77077	1,160	77093	3,145
77498	7	77053	611	77032	1,195	77571	3,198
77573	8	77339	629	77081	1,195	77536	3,201
77357	10	77096	630	77087	1,241	77070	3,505
77407	11	77061	647	77024	1,285	77083	3,513
77584	17	77336	660	77034	1,301	77530	3,524
77010	19	77018	664	77076	1,321	77520	3,654
77365	24	77085	669	77080	1,364	77388	3,793
77046	40	77562	677	77055	1,364	77049	3,820
77507	48	77033	709	77047	1,370	77089	3,835
77523	73	77012	720	77075	1,406	77493	3,893
77477	87	77026	720	77598	1,507	77064	3,974
77581	102	77005	751	77586	1,554	77506	4,016
77489	190	77043	753	77099	1,595	77338	4,085
77030	223	77008	771	77029	1,604	77044	4,092
77484	227	77057	798	77072	1,737	77073	4,448
77098	284	77091	808	77036	1,739	77015	4,586
77050	288	77068	816	77037	1,769	77502	4,622
77003	301	77042	818	77587	1,908	77375	4,622
77059	355	77035	822	77060	2,157	77373	4,950
77345	360	77401	834	77082	2,246	77396	5,085
77006	370	77079	835	77067	2,252	77521	5,402
77027	389	77063	836	77505	2,335	77095	5,418
77494	402	77020	868	77504	2,434	77346	5,720
77031	412	77058	902	77041	2,475	77379	5,780
77056	419	77092	908	77377	2,533	77429	5,938
77054	423	77023	954	77389	2,598	77433	7,231
77019	442	77007	958	77014	2,630	77084	9,098
77051	443	77045	965	77065	2,654	77449	11,755
77025	467	77022	1,017	77503	2,735		
77078	504	77546	1,024	77066	2,805		
77062	507	77009	1,035	77532	2,879		
77094	518	77069	1,061	77040	2,909		

APPENDIX C

Total Confirmed COVID-19 Related Deaths by Zip Code Ordered by Number of Deaths, January 1, 2020 – June 13, 2021							
Zip Code	COVID Deaths	Zip Code	COVID Deaths	Zip Code	COVID Deaths	Zip Code	COVID Deaths
77565	0-5	77098	9	77571	27	77346	49
77362	0-5	77345	9	77008	28	77074	50
77381	0-5	77336	9	77047	28	77095	51
77382	0-5	77007	10	77450	28	77091	52
77355	0-5	77389	10	77506	29	77034	52
77386	0-5	77547	12	77053	30	77023	53
77535	0-5	77065	12	77598	31	77063	55
77354	0-5	77066	13	77433	31	77015	55
77380	0-5	77079	14	77530	32	77075	56
77498	0-5	77058	14	77044	33	77504	56
77573	0-5	77388	14	77004	35	77064	56
77357	0-5	77056	15	77070	35	77081	57
77407	0-5	77086	15	77090	36	77493	58
77584	0-5	77013	16	77028	37	77011	61
77010	0-5	77562	16	77038	37	77045	61
77365	0-5	77003	17	77021	39	77076	61
77046	0-5	77031	17	77057	39	77080	61
77507	0-5	77078	17	77092	39	77017	62
77523	0-5	77536	17	77039	40	77521	63
77477	0-5	77067	18	77033	41	77020	64
77581	0-5	77429	18	77043	41	77016	65
77484	0-5	77032	19	77029	42	77009	66
77094	0-5	77587	19	77503	42	77089	66
77447	0-5	77096	21	77077	43	77082	68
77050	6	77051	22	77084	43	77093	68
77027	6	77377	22	77339	44	77083	68
77401	6	77379	22	77014	44	77099	70
77069	6	77025	23	77532	44	77520	71
77489	7	77024	23	77040	44	77022	76
77059	7	77071	24	77049	44	77055	77
77006	7	77073	24	77396	45	77088	77
77494	7	77085	25	77502	46	77338	78
77054	7	77505	25	77373	46	77087	79
77005	7	77041	25	77026	47	77449	89
77068	7	77062	26	77061	48	77036	90
77030	8	77037	26	77035	48	77072	101
77019	8	77048	27	77060	48		
77546	8	77018	27	77375	48		
77586	8	77042	27	77012	49		

APPENDIX D

**Number of Individuals Per 100,000 Residents Fully Vaccinated and Social Vulnerability Index (SVI),
Ordered by Residents Vaccinated, December 14, 2020 – June 13, 2021^{xxxix}**

Zip Code	Per 100k Rate	SVI	Zip Code	Per 100k Rate	SVI	Zip Code	Per 100k Rate	SVI	Zip Code	Per 100k Rate	SVI
77060	22,214	0.94	77074	30,363	0.86	77040	36,262	0.55	77062	46,688	0.19
77013	22,955	0.98	77051	30,413	0.80	77048	36,318	0.85	77041	47,100	0.31
77090	24,441	0.70	77587	30,546	0.91	77505	36,396	0.24	77009	47,215	0.62
77506	24,544	0.95	77598	30,707	0.57	77023	36,534	0.76	77089	48,335	0.47
77067	24,819	0.79	77012	30,794	0.99	77065	36,739	0.43	77077	48,415	0.29
77083	24,866	0.53	77073	31,141	0.50	77063	37,101	0.57	77079	51,756	0.27
77081	24,892	0.81	77086	31,418	0.78	77004	37,125	0.53	77054	52,215	0.26
77078	26,669	0.89	77028	31,523	0.84	77449	37,215	0.36	77003	52,785	0.61
77076	26,686	0.86	77015	31,742	0.76	77085	37,244	0.60	77433	53,362	0.11
77050	27,005	0.71	77396	31,875	0.51	77055	37,699	0.68	77025	55,272	0.32
77093	27,168	0.97	77502	31,950	0.89	77011	37,718	0.96	77389	56,282	0.14
77039	27,507	0.73	77338	31,996	0.58	77084	38,002	0.36	77493	56,496	0.34
77036	28,020	0.93	77571	32,032	0.38	77044	38,215	0.41	77401	59,208	0.03
77336	28,026	0.30	77504	32,105	0.88	77071	38,287	0.68	77005	61,645	0.03
77037	28,217	0.69	77031	32,140	0.64	77047	38,454	0.55	77059	63,757	0.05
77091	28,433	0.92	77080	32,309	0.83	77064	38,536	0.47	77006	64,753	0.09
77014	28,676	0.78	77099	32,438	0.80	77082	38,695	0.54	77008	66,999	0.08
77450	28,699	0.18	77022	32,687	0.97	77070	38,759	0.49	77007	68,127	0.01
77503	28,802	0.82	77075	32,809	0.61	77346	39,561	0.12	77002	71,483	0.42
77092	28,915	0.75	77020	32,937	0.89	77388	39,899	0.13	77019	73,174	0.09
77061	28,996	0.70	77373	33,075	0.30	77095	40,972	0.23	77098	77,032	0.07
77547	29,009	0.66	77536	33,100	0.44	77377	41,109	0.24	77024	78,434	0.16
77520	29,099	0.82	77339	33,411	0.32	77429	41,110	0.06	77027	87,967	0.01
77562	29,249	0.63	77045	34,070	0.84	77068	41,789	0.43	77010	89,907	0.02
77447	29,279	0.45	77035	34,114	0.74	77586	42,411	0.18	77056	111,524	0.14
77016	29,300	0.89	77017	34,144	0.66	77345	42,873	0.05	77046	136,495	0.10
77026	29,339	0.94	77021	34,838	0.74	77069	43,594	0.22	77030	160,266	0.28
77034	29,549	0.67	77042	34,891	0.38	77043	43,993	0.52			
77521	29,631	0.64	77087	34,997	1.00	77379	44,720	0.21			
77033	29,933	0.93	77032	35,060	0.99	77058	44,971	0.46			
77088	30,025	0.77	77049	35,112	0.63	77057	45,187	0.34			
77038	30,238	0.50	77029	35,202	0.88	77018	46,028	0.48			
77532	30,265	0.37	77072	35,300	0.87	77096	46,247	0.39			
77530	30,335	0.59	77066	36,174	0.59	77375	46,454	0.45			

^{xxxix} Table excludes data for zip codes with large portions of Census Tracts in another County.

The Harris County Commissioners Court's Analyst's Office provides the Harris County Commissioners Court members with objective, nonpartisan, and timely fiscal and policy analysis related to the efficiency and effectiveness of various County operations.

This memo was prepared by Amy Rose, Senior Analyst.

Commissioners Court's Analyst's Office
1115 Congress Street, 6th Floor
Houston, Texas 77002

Main: (832) 927-6900
Email: info@ccao.hctx.net